USSN 10/804,505

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II. CLAIM AMENDMENTS

1. (Currently Amended) An Substituted Azetidine compound compounds of formula I,

$$R^1$$
 A
 A
 R^5

wherein

A represents a -C=O-moiety,

 R^1 , R^3 , identical or different, represent a hydrogen atom or a linear or branched, saturated or unsaturated C_{14} -aliphatic group,

R² represents a hydroxyl group or a C_{I-3}-alkoxy group,

or R^1 and R^2 or R^2 and R^3 together form an -O-CH $_2$ -CH $_2$ -moiety, which is optionally substituted with one or more methyl groups

 R^4 represents a hydrogen atom, an optionally at least mono- substituted aryl group, or a linear or branched, saturated or unsaturated aliphatic group, which may be substituted by one or more substituents independently selected from the group consisting of hydroxy, fluorine, chlorine, bromine, branched or unbranched C_{i-4} -perfluoroalkoxy and branched or unbranched C_{i-4} -perfluoroalkyl,

 R^{5} represents a hydrogen atom, a halogen atom, a hydroxyl group, a linear or branched, saturated or unsaturated, optionally at least mono-substituted aliphatic group,

 R^6 represents a hydrogen atom, a halogen atom, a hydroxyl group, a linear or branched, saturated or unsaturated, optionally at least mono-substituted aliphatic group,

with the provisos

that if R^2 is alkoxy, at least one of R^1 , R^3 , R^4 , R^5 And R^6 does not represent a hydrogen atom.

that if R^4 represents a hydrogen atom and one *of* the residues R^5 and R^6 represents a hydrogen atom, then the other one *of* these residues R^5 and R^6 does not represent a methyl group, which is substituted by an -NH₂-moiety or an azaheterocycle, and

optionally in form of one of the stereoisomers, a racemate or in form of a mixture of at least two of the stereoisomers, in any mixing ratio, or a corresponding salt thereof, or a corresponding solvate thereof.

- 2. (Currently Amended) A compound Compounds according to claim 1, characterized in that R^1 and R^3 , identical or different, represent a hydrogen atom or a linear or branched C_{i-4} -alkyl group.
- 3. (Currently Amended) A compound Compounds according to claim 1, characterized in that R^1 and R^3 are identical and represent a C_{4-} alkyl group.
- 4. (Currently Amended) A compound Compounds according to claim 1, characterized in that R^2 represents a hydroxyl group or a methoxy group.
- 5. (Currently Amended) A compound Compounds according to claim 1, characterized in that R⁴ represents a hydrogen atom, an optionally at least mono-substituted phenyl group, or a linear or branched, saturated or unsaturated C₁₋₆ aliphatic group, whereby said aliphatic group may be substituted by one or more substituents independently selected from the group consisting of hydroxy, fluorine, chlorine, bromine, branched or unbranched C₁₋₄-perfluoroalkoxy and branched or

unbranched C_{i-4} -perfluoroalkyl, preferably a hydrogen atom, a methyl group or an unsubstituted phenyl group.

- 6. (Currently Amended) A compound Compounds according to claim 5, characterized in that R^5 represents a hydrogen atom, a halogen atom, a hydroxyl group, a linear or branched, saturated or unsaturated, optionally at least mono- substituted C_{16} aliphatic group.
- 7. (Currently Amended) A compound Compounds according to claim 1, characterized in that R^6 represents a hydrogen atom, a halogen atom, a hydroxyl group, a linear or branched, saturated or unsaturated, optionally at least mono- substituted C_{l-6} aliphatic group.
- 8. (Withdrawn) Compounds according to claim 1, characterized in that R^7 , R^8 , R^9 , R^{10} , independent from one another, represent a linear or branched, saturated or unsaturated, optionally at least mono-substituted C_{16} aliphatic group.
- 9. (Currently Amended) A compound Compounds according to claim 1 of formula I,

wherein

A represents a -C=O-moiety,

R¹, R³ both identically represent an iso-propyl group or a tert-butyl group,

R² represents a hydroxyl group or a methoxy group,

or R^1 and R^2 or R^2 and R^3 together form an -Q-CH₂-C(CH₃)₂-chain, whereby the oxygen atom of said chain is bonded to the 4- position of the phenyl ring,

- R⁴ represents a hydrogen atom, a methyl group or an unsubstituted phenyl group,
- R⁵ represents a bromine atom, or a hydroxyl group,
- R⁶ represent a hydrogen atom, a methyl group or a hydroxyl group,
- optionally in form of one of the stereoisomers, a racemate or in form of a mixture of at least two of the stereoisomers, in any mixing ratio, or a corresponding salt thereof, or a corresponding solvate thereof.
- (Currently Amended) <u>A compound Compounds</u> according to claim 1 selected from the group consisting of
- [1] (3.5-di-tert-butyl-4-hydroxy-phenyl)-(3-hydroxy- azetidin-1-yl)-methanone;
- [3] (3,5-di-tert-butyl-4-hydroxy-phenyl)-(3-hydroxy-3- methyl-azetidin-1-yl)-methanone:
- [4] (3,5-di-tert-butyl-4-hydroxy-phenyl)-(3-hydroxy-2- methyl-azetidin-1-yl)-methanone;
- [7] (3-Bromo-azetidin-1-yl)-(3,S-di-tert-butyl-4-hydroxy- phenyl)-methanone;
- [9] (3,5-di-tert-butyl-4-methoxy-phenyl)-(3-hydroxy- azetidin-1-yl)-methanone;
- [10] (3-hydroxy-azetidin-1-yl)-(4-hydroxy-3,S-diisopropyl- phenyl)-methanone;
- [12] (3,5-di-tert-butyl-4-hydroxy-phenyl)-(3-hydroxy-2- phenyl-azetidin-1-yl)-methanone;
- [14] (7-tert-butyl-3,3-dimethyl-2-3-dihydro-benzofuran-S- yl)-(3-hydroxy-azetidin-1-yl)-methanone;

optionally in form of a corresponding salt or a corresponding solvate.

11. (Currently Amended) Process for the preparation of <u>an</u> substituted azetidine <u>compound</u> empounds of formula I according to ef <u>claim 1</u> claim1, characterized in that at least one compound of formula II,

wherein R1-R3 have the meaning according to <u>claim 1</u> claim1, X represents a bond and R represents a carboxy group or an activated carbonyl group, is reacted with at least one compound of formula III.

optionally in the form of a corresponding salt, wherein $R^4 \cdot R^6$ have the meaning according to claim 1, to yield a compound of formula I according to claim 1, wherein A represents a -(C=O)-moiety which is optionally purified and/or optionally isolated.

- (Currently Amended) Medicament comprising at least one substituted azetidine compound according to ef claim 1 and one or more pharmaceutically acceptable excipients.
- 13. (Currently Amended) A method for the prophylaxis and/or treatment of cyclooxygenase-1 or cyclooxygenase-2 related disorders comprising administering to a patient in need thereof a cyclooxygenase-1 or cyclooxygenase-2 inhibiting amount of the medicament according to claim 12.

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14. (Cancelled)

- 15. (Currently Amended) A method for the prophylaxis and/or treatment of pain comprising administering to a patient in need thereof a pain inhibiting amount of the medicament according to claim 12.
- 16. (Currently Amended) A method for the prophylaxis—and/or treatment of inflammation comprising administering to a patient in need thereof an inflammation inhibiting amount of the medicament according to claim 12.
- 17. (Currently Amended) A method for the prophylaxis—and/or treatment of inflammation according to claim 16 where the inflammation is the result of a disorder selected from the group consisting of arthritis, rheumatoid arthritis, spondyloarthropathies, gouty arthritis, osteoarthritis, systemic lupus erythematosus, juvenile arthritis, rheumatic fever, symptoms associated with influenza or other viral infections, common cold, lower back pain, neck pain, dysmenorrhea, headache, toothache, sprains, strains, myositis, neuralgia, synovitis, gout, ankylosing spondylitis, bursitis, edema, inflammations following dental procedures, vascular diseases, migraine headaches, periarteritis nodosa, thyrolditis, aplastic anemia, Hodkin's disease, sclerodoma, type I diabetes, myasthenia gravis, sarcoidosis, nephrotic syndrome, Behcet's syndrome, polymyositis, gingivitis, hypersensivity, conjunctivitis, swelling ocurring after injury and myocardia ischemia.

18-22. (Cancelled)

- 23. (Currently Amended) <u>A compound</u> Compounds according to claim 1 where the stereoisomers are enantiomers or diastereomers.
- 24. (Currently Amended) <u>A compound</u> Compounds of claim 3 where the C_{i-4} alkyl group, is a C_{3-4} alkyl group.
- 25. (Currently Amended) A compound Compounds of claim 3 where a C_{I-4} alkyl group, is an iso-propyl group or a tert.-Butyl group.

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26. (Currently Amended) <u>A compound</u> Compounds of claim 1 where R^6 represents a hydrogen atom, a hydroxyl group or a methyl group.

27. (Currently Amended) <u>A compound</u> Compounds according to claim 1, characterized in that R^7 , R^8 , R^9 , R^{10} , independent from one another, represent a –linear or branched C_{L6} alkyl group.

28-35. (Cancelled)

36. (Currently Amended) A medicament comprising at least one substituted azetidine compound according to claim 2 and one or more pharmaceutically acceptable excipients.

37. (Currently Amended) A medicament comprising at least one substituted azetidine compound according to claim 3 and one or more pharmaceutically acceptable excipients.

38. (Currently Amended) A medicament comprising at least one substituted azetidine compound according to claim 4 and one or more pharmaceutically acceptable excipients.

39. (Currently Amended) A medicament comprising at least one substituted azetidine compound according to claim 5 and one or more pharmaceutically acceptable excipients.

40. (Currently Amended) A medicament comprising at least one substituted azetidine compound according to claim 6 and one or more pharmaceutically acceptable excipients.

41. (Currently Amended) A medicament comprising at least one substituted azetidine compound according to claim 7 and one or more pharmaceutically acceptable excipients.

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42. (Currently Amended) A medicament comprising one or more pharmacologically acceptable excipients and at least one substituted azetidine compound of formula I,

$$\begin{array}{c|c} R^1 & & \\ \hline \\ R^2 & & \\ \hline \\ R^3 & & \\ \end{array}$$

wherein

A represents a -C=O-moiety,

 R^1 , R^3 , identical or different, represent a hydrogen atom or a linear or branched, saturated or unsaturated C_{H^4} -aliphatic group,

R² represents a hydroxyl group or a C_{I-3}-alkoxy group,

or R^1 and R^2 or R^2 and R^3 together form an -O-CH $_2$ -CH $_2$ -moiety, which is optionally substituted with one or more methyl groups,

 R^4 represents a hydrogen atom, an optionally at least mono- substituted aryl group, or a linear or branched, saturated or unsaturated aliphatic group, which may be substituted by one or more substituents independently selected from the group consisting of hydroxy, fluorine, chlorine, bromine, branched or unbranched C_{i-4} -perfluoroalkoxy and branched or unbranched C_{i-4} -perfluoroalkyl,

 R^{5} represents a hydrogen atom, a halogen atom, a hydroxyl group, a linear or branched, saturated or unsaturated, optionally at least mono-substituted aliphatic group,

 R^6 represents a hydrogen atom, a halogen atom, a hydroxyl group, a linear or branched, saturated or unsaturated, optionally at least mono-substituted aliphatic group with the provisos

that if R^4 represents a hydrogen atom and one of the residues R^5 and R^6 represents a hydrogen atom, then the other one *of* these residues R^5 and R^6 does not represent a methyl group, which is substituted by an -NH₂-moiety or an azaheterocycle, and

optionally in form of one of the stereoisomers, a racemate or in form of a mixture of at least two of the stereoisomers, in any mixing ratio, or a corresponding salt thereof, or a corresponding solvate thereof.